

**Consolidated Water Use Efficiency 2002 PSP
Proposal Part One:
A. Project Information Form**

1. Applying for (select one):	<input type="checkbox"/> (a) Prop 13 Urban Water Conservation Capital Outlay Grant
	<input type="checkbox"/> (b) Prop 13 Agricultural Water Conservation Capital Outlay Feasibility Study Grant
	<input checked="" type="checkbox"/> (c) DWR Water Use Efficiency Project
2. Principal applicant (Organization or affiliation):	North of the River Municipal Water District
3. Project Title:	ULFT Retrofit Program
4. Person authorized to sign and submit proposal:	Name, title William R. Miller, General Manager
	Mailing address 4000 Rio Del Norte St., Bakersfield, CA 93308
	Telephone (661) 393-5411
	Fax. (661) 399-8911
	E-mail spock@lightspeed.com
5. Contact person (if different):	Name, title. Tom Holson, Water Conservation Coordinator
	Mailing address. 4000 Rio Del Norte St., Bakersfield, CA 93308
	Telephone (661) 393-5411
	Fax. (661) 399-8911
	E-mail tomhols@usa.com
6. Funds requested (dollar amount):	\$128,314
7. Applicant funds pledged (dollar amount):	\$36,191
8. Total project costs (dollar amount):	\$164,505
9. Estimated total quantifiable project benefits (dollar amount):	\$33,308
Percentage of benefit to be accrued by applicant:	100%
Percentage of benefit to be accrued by CALFED or others:	95%

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10. Estimated annual amount of water to be saved (acre-feet): 18-Yr 1, 32-Yr 2, and 42 Yrs
3-10 approx. Exact numbers
shown in analysis portion of
document.
- Estimated total amount of water to be saved (acre-feet): 337.5 AF
- Over 10 years 337.5 AF
Estimated benefits to be realized in terms of water quality, in stream
flow, other: 95% of total savings is a
reduction in Delta exports =
321 AF
11. Duration of project (month/year to month/year): Oct 2002 – June 2005
12. State Assembly District where the project is to be conducted: 32
13. State Senate District where the project is to be conducted: 18
14. Congressional district(s) where the project is to be conducted: 21
15. County where the project is to be conducted: Kern
16. Date most recent Urban Water Management Plan submitted to the
Department of Water Resources: December 2000
17. Type of applicant (select one):
Prop 13 Urban Grants and Prop 13 Agricultural
Feasibility Study Grants:
- ☐ (a) city
☐ (b) county
☐ (c) city and county
☐ (d) Joint power authority
☒ (e) other political subdivision of the State,
including public water district
☐ (f) incorporated mutual water company
- DWR WUE Projects: the above entities (a)
through (f) or:
- ☐ (g) investor-owned utility
☐ (h) non-profit organization
☐ (i) tribe
☐ (j) university
☐ (k) state agency
☐ (l) federal agency
18. Project focus:
☐ (a) agricultural
☒ (b) urban

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19. Project type (select one):
Prop 13 Urban Grant or Prop 13 Agricultural
Feasibility Study Grant capital outlay project
related to:

- ☐ (a) implementation of Urban Best Management Practices
- ☐ (b) implementation of Agricultural Efficient Water Management Practices
- ☐ (c) implementation of Quantifiable Objectives (include QO number(s))
- ☐ (d) other (specify)

DWR WUE Project related to:

- ☒ (e) implementation of Urban Best Management Practices
- ☐ (f) implementation of Agricultural Efficient Water Management Practices
- ☐ (g) implementation of Quantifiable Objectives (include QO number(s))
- ☐ (h) innovative projects (initial investigation of new technologies, methodologies, approaches, or institutional frameworks)
- ☐ (i) research or pilot projects
- ☐ (j) education or public information programs
- ☐ (k) other (specify)

20. Do the actions in this proposal involve physical changes in land use, or potential future changes in land use?

- ☐ (a) yes
- ☒ (b) no

If yes, the applicant must complete the CALFED PSP Land Use Checklist found at http://calfed.water.ca.gov/environmental_docs.html and submit it with the proposal.

**Consolidated Water Use Efficiency 2002 PSP
Proposal Part One
B. Signature Page**

By signing below, the official declares the following:

The truthfulness of all representations in the proposal;

The individual signing the form is authorized to submit the proposal on behalf of the applicant; and

The individual signing the form read and understood the conflict of interest and confidentiality section and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant.

Signature

Name and title

Date

Proposal Part Two

Project Summary

North of the River Municipal Water District, located just north of Bakersfield in the Southern San Joaquin Valley, proposes implementing an ultra-low-flush toilet (ULFT) voucher program, that will result in 1200 ULFT retrofits over 3 years. Studies show that 1.6 gallon per flush ULFTs can save 25 gallons per day. The majority of toilets within the District's service area are 5-7 gallon models, therefore maximizing the savings potential. The projected savings from a ULFT program are 337.5 acre-feet. Approximately 95% of the District's water supply is surface water purchased from the Kern County Water Agency. The water originates from the State Water Project. Therefore, 95% of the total water savings from this project, or 321 acre-feet, represents conservation yield that contributes to CALFED objectives. The total project cost is \$164,505. NORMWD is requesting \$128,314 in grant funding in order to enable the District to proceed with this project. Although this project is not locally cost-effective, funding of this project will allow the District to implement BMP #14. It will contribute to CALFED objectives of urban water conservation and savings beyond the baseline level of locally cost-effective BMP implementation.

A. Scope of Work: Relevance and Importance

North of the River Municipal Water District (NORMWD) is a small water district just north of Bakersfield. It serves about 5,500 persons on a retail basis and wholesales water to Oildale, an unincorporated community of about 35,000 people. Approximately 95% of the District's supply is surface water purchased from Kern County Water Agency (KCWA) and comes from the H.C. Garnett Water Treatment Plant. The water originates with the State Water Project.

Approximately 77% of NORMWD's accounts are not metered, making it difficult to track water usage and conservation efforts. NORMWD would like to begin a residential ULFT retrofit voucher program. The objective is to reduce water use by installing ULFTs and promoting conservation efforts.

Recognizing that improving water use efficiency is a critical issue to the state of California, NORMWD is seeking to retrofit existing toilets with ULFTs in order to achieve greater water use efficiency and reduce long-term water demands from the State Water Project.

The proposed project will contribute to CALFED objectives of increasing statewide water use efficiency, beyond the level of what is locally cost-effective. It will reduce the District's need to purchase water from KCWA that originates with the State Water Project. The project will allow NORMWD to proceed with implementation of Urban Best Management Practice (BMP) # 14 – Residential ULFT Replacement Programs. The project is also consistent with the District's Urban Water Management Plan, adopted in December 2000.

B. Scope of Work: Technical/Scientific Merit, Feasibility, Monitoring and Assessment

Methods, Procedures and Facilities

Program Description

NORMWD proposes developing a voucher program to retrofit 1200 residential toilets with ULFTs over 3 years. Eligible customers are issued vouchers that they can redeem at local distributors to cover a portion of the cost of the ULFT (\$75). Voucher programs are designed to overcome the customer capital outlay objection that typically occurs with rebate programs. A voucher program also offers customers flexibility in selecting a ULFT. They offer a point of purchase discount while still providing controls for customer qualification and participation tracking. They work well in developed markets where distribution channels are already set up and marketing by distributors, dealers, etc. can be leveraged. For each ULFT retrofitted, NORMWD will issue a voucher worth \$75, redeemable at participating distributors. The District will establish an approved list of ULFTs for the program.

Targeted Customers

The ULFT Voucher Program will target single and multi-family residential customers with existing pre-1990 toilets. Since the majority of the housing stock in the targeted area is pre-1980, we estimate that most of the existing toilets are in the 5-7gpf range, thereby giving slightly higher savings levels.

Participation Steps

1. Customers request an application for participation in the program
2. Customer completes and returns the application to NORMWD
3. NORMWD processes the application, reserves the funds and issues a voucher to the customer
4. Customer purchases approved ULFTs from participating distributors and submits the voucher to the vendor/distributor
5. Participating distributors provide vouchers and a reconciliation report to NORMWD for reimbursement
6. NORMWD issues reimbursement check to distributors/vendors
7. NORMWD randomly selects participants for inspection verification and conducts inspections (5% of applications).

Installation

The ULFTs are either self-installed by a customer or the customers hires a contractor to perform the installation. Liability for the installation rests with the customer.

Program Marketing

NORMWD proposes to use a variety of marketing methods to promote the program, including:

- Bill inserts
- Direct mail
- Flyers
- Point-of-purchase displays and information at participating distributors
- Newspaper Ads
- Partnerships with local schools

Program Start-Up

NORMWD conservation staff will develop a list of approved ULFTs for inclusion in the program. NORMWD will negotiate with local vendors and distributors and secure their participation in the program. In addition, NORMWD will create marketing materials, the necessary application forms and ULFT vouchers. NORMWD's in-house staff will develop a customized database to track applications and manage voucher processing.

Program Administration

NORMWD will manage the voucher redemption and disbursement tracking, payment to program vendors/distributors and provide customer service for the program.

Task List and Schedule with Quarterly Expenditures

Task	Year 1			Year 2				Year 3				TOTAL
	Sep-Dec	Jan-Mar	Apr-Jun	Jul-Aug	Sep-Dec	Jan-Mar	Apr-Jun	Jul-Aug	Sep-Dec	Jan-Mar	Apr-Jun	
	2nd Q	3rd Q	4 Q	1 Q	2nd Q	3rd Q	4 Q	1 Q	2nd Q	3rd Q	4 Q	
Award Notification												
Contract Execution												
Database Development	\$ 3,900											
Vendor Negotiation and Contract Execution	\$ 3,000											
Program Development and Management	\$ 2,805											
Applications Developed & Printed	\$ 500											
ULFT Vouchers Issued		250	250	100	100	100	100	75	75	75	75	1200
ULFT Inspections												
Marketing (\$5/unit) - develop and print marketing materials - flyers, point of purchase, bill inserts												
Voucher Processing and Funds Reimbursement to Distributors												
Cost Per Unit		\$ 128	\$ 128	\$ 129	\$ 129	\$ 129	\$ 129	\$ 129	\$ 129	\$ 129	\$ 129	
Quarterly Expenditure	\$10,205	\$ 32,000	\$32,000	\$12,900	\$12,900	\$12,900	\$12,900	\$ 9,675	\$ 9,675	\$ 9,675	\$ 9,675	\$164,505

Expenditures based on \$127 per unit, \$126 for first year since applications (\$1/unit) are pre-printed

Line item break-down shown in program budget

Monitoring and Assessment

Monitoring and assessment will take place on several levels as follows:

1. Quantification of the number of ULFTs installed on a monthly and quarterly basis, as well as for the program overall.
2. Random inspection of a statistically valid percentage of the ULFTs in order to verify installation and program compliance. The percentage may be modified as warranted by the program.
3. Quantification of the water savings based on the installation of ULFTs. This will be calculated by evaluating weather normalized post installation consumption with a base-line level of consumption. The District will prepare a final report based upon its findings.
4. Evaluation of customer feedback.
5. The District will track customer feedback resulting from the ULFT program.
6. A copy of the final report will be made available to CALFED and to the California Urban Water Conservation Council.

C. Qualifications of the Applicants and Cooperators

1. Resumes are attached for the proposed NORMWD project manager(s).
See Attachment 1.
2. External Cooperators include local distributors. NORMWD will develop agreements with locally established ULFT distributors for partnership in the program.

D. Benefits and Costs

1. Budget Breakdown

				Year 1	Year 2	Year 3	Total
ULFT Volume				500	400	300	1200
Direct Labor Hours							0
	Computer Database Development			120			120
	Vendor Negotiation			120			120
	Program Coordination/Administration			500	400	300	1200
	ULFT Inspections 0.5 hr/unit x 5% of units			13	10	8	50
	Total Direct Labor Hours			753	410	308	1490
Salaries		Total Salary	Hourly Rate	Year 1	Year 2	Year 3	Total
Start-Up	Database developer (0.08% time)	\$ 65,000	\$32.50	\$ 3,900			\$ 3,900
Start-Up	Conservation Coordinator 1st Yr Vendor Negotiation	\$ 50,000	\$25.00	\$ 3,000			
	Conservation Coordinator (20% time)	\$ 50,000	\$25.00	\$ 12,500	\$ 10,000	\$ 7,500	\$ 30,000
	ULFT Inspector - hourly rate	\$ 40,000	\$20.00	\$ 250	\$ 200	\$ 150	
Benefits	30% of Salaries			\$ 5,895	\$ 3,060	\$ 2,295	\$ 11,250
Travel				N/A	N/A	N/A	\$ -
Supplies and Expendables							\$ -
	ULFT Vouchers (\$75 per ULFT)			\$ 37,500	\$ 30,000	\$ 22,500	\$ 90,000
	Application Forms Develop & Print (\$1/unit)			\$ 500	\$ 400	\$ 300	\$ 1,200
	Marketing (\$5/unit)			\$ 2,500	\$ 2,000	\$ 1,500	\$ 4,800
Services or Consultants				N/A	N/A	N/A	\$ -
Equipment				N/A	N/A	N/A	\$ -
Other Direct Costs							\$ -
	Voucher Processing & Funds Administration (\$3/unit)			\$ 1,500	\$ 1,200	\$ 900	\$ 3,600
Total Direct Costs				\$ 67,545	\$ 46,860	\$ 35,145	\$149,550
Indirect Costs (10%)				\$ 6,755	\$ 4,686	\$ 3,515	\$ 14,955
	Includes program telephone, office, general office staff						
Total Cost				\$ 74,300	\$ 51,546	\$ 38,660	\$164,505
Cost Per Unit (Not Including Start -Up)				\$ 129	\$ 129	\$ 129	

2. Cost-Sharing

NORMWD proposes a local cost-share equivalent to the level at which this project is cost-effective for the District. Therefore the District proposes to cost-share 22 % of the total project cost or \$36,191.10.

3. Benefit Summary and Breakdown

Assessment of Costs and Benefits

Assumptions and Methodologies

1. Per toilet savings are as shown in the table below. Source -Chesnutt, McSpadden, Bamezai, ULFT Programs: Evaluation of Program Outcomes & Savings.

	Single Family	Multi-Family
Savings Per Toilet (AF/Yr)	0.0335	0.0493

2. Natural replacement rate is 4%
3. Product life is 10 years
4. Discount rate is 6%
5. Avoided cost of water is \$135 per A/F
6. No significant benefit from waste-water reduction

	Total Toilets Retrofitted		Water Savings					Benefits	
Year	SF	MF	SF	MF	Total Savings	Annual Savings Adjusted for Natural Replacement AF	SWP Annual Savings (95% of Annual) AF	Value of Water Saved	PV Water Saved
			Acre-Feet						
1	330	170	11.06	8.381	19.436	18.66	17.73	\$ 2,518.91	\$ 2,376.33
2	270	130	9.045	6.409	15.454	32.15	30.55	\$ 4,340.87	\$ 3,863.36
3	200	100	6.7	4.93	11.63	41.16	39.10	\$ 5,556.32	\$ 4,665.19
4						39.51	37.54	\$ 5,334.07	\$ 4,225.08
5						37.93	36.03	\$ 5,120.70	\$ 3,826.49
6						36.41	34.59	\$ 4,915.88	\$ 3,465.50
7						34.96	33.21	\$ 4,719.24	\$ 3,138.56
8						33.56	31.88	\$ 4,530.47	\$ 2,842.47
9						32.22	30.61	\$ 4,349.25	\$ 2,574.32
10						30.93	29.38	\$ 4,175.28	\$ 2,331.46
					Total	337.49	320.61	\$ 45,560.99	\$ 33,308.76

*Natural replacement rate = 4%

Estimated Project Costs							
Year	# Units	Total	NORMWD Cost Share	Grant Funding Requested	PV NORMWD Cost Share	PV Grant Funding	PV Total Costs
			22%	78%			
1	500	\$ 74,299.50	\$ 16,345.89	\$ 57,953.61	\$15,420.65	\$ 54,673.22	\$ 70,093.87
2	400	\$ 51,546.00	\$ 11,340.12	\$ 40,205.88	\$10,092.67	\$ 35,783.09	\$ 45,875.76
3	300	\$ 38,659.50	\$ 8,505.09	\$ 30,154.41	\$ 7,141.04	\$ 25,318.22	\$ 32,459.26
Total	1200	\$ 164,505.00	\$ 36,191.10	\$ 128,313.90	\$32,654.35	\$ 115,774.53	\$ 148,428.89

Utility Cost/Benefit Ratio	0.22
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Quantified Costs and Benefits

Benefit	Acre/Feet	\$ Benefit	Beneficiary
Total Water Savings	337.49	\$33,308	NORMWD, Customers, CALFED 95% (see below)
State Water Project Water Savings (95% of total)	320.61		CALFED/Society

Non-Quantified Costs and Benefits

Improve the Bay Delta ecosystem through the reduction in water diversions by NORMWD that originate with the State Water Project.	Beneficiary – All/Society
Information and feedback to help NORMWD promote and evaluate the impact of conservation programs.	Beneficiary – NORMWD and Customers
Local economic benefit from increased sales of ULFTs	Beneficiary – Local area/local businesses

E. Outreach, Community Involvement and Acceptance

The proposed ULFT retrofit program will serve as a tool for the District to promote water conservation within its service area. The program will be marketed to both single and multi-family customers using a mix of bill inserts, flyers and point-of-purchase displays. In addition, the District may develop partnerships with schools that would have multiple benefits; the schools would promote the program, it would provide an opportunity to educate students about the need for water conservation and it could serve as a fundraiser for the school. The District will also provide participating customers with additional residential conservation education materials. District staff will also be trained

to address customer questions and concerns related to the performance of ULFTs, as well as other residential conservation measures.

No additional people will be directly employed as a result of this project, however District staff will receive training and acquire expertise in developing and managing a ULFT retrofit program. Local ULFT distributors will benefit from increased sales levels as a result of the voucher incentive and program marketing efforts, thereby creating local economic benefits.

Proposal Part Three

Matching Funds Commitment Letter

To be submitted if selected for funding

Resolution

To be submitted if selected for funding

Environmental Documentation

To be submitted if selected for funding

WILLIAM R. MILLER 30601 Sheeptrail Court Tehachapi, California 93561 (661) 821-0471		
YEARS	TITLE	NAME OF ORGANIZATION
2002	Convener	California Urban Water Conservation Council
1993-Present 1997-Present	Member President	Bear Valley Community Services District; Board of Directors
1999-Present	Commissioner	Kern County Local Agency Formation Commission
1992-Present	General Manager	North of the River Municipal Water District
2001	Vice-Convener	California Urban Water Conservation Council
1987-Present 1996	Member President	California Special Districts Association (CSDA); Brd.Of Directors
1993	Member	Assembly Local Government Committee; Budget Task Force
1997-Present	Board Of Directors	Association Of California Water Agencies (ACWA)
1996-Present	President	Kern County Special District Association (KCSDA)
1996-Present	Chairman	Urban Bakersfield Advisory Committee; KCWA
1996-1999	Project Principal	California Governance Consensus Project
1979-1991	General Manager	Templeton Community Services District
DATE	OTHER ACTIVITIES	
1990	Environmental Technology And Public Policy Delegation To The Soviet Union	
October 2001	Water Policy Delegation To Cuba	
DATE	CONTINUED EDUCATION	
April 2001	Special District Leadership Foundation; Certified As Special District Administrator	
March 1982	State Of California/Department Of Health Services; Water Treatment Operator Certificate-Grade IV	
May 1992	Association Of Records Managers And Administrators; Training	
April 1993	American Society Of Civil Engineers; Earthquake Risk Reduction Utility Lifelines	
October 1993	American Water Works Association/Cal-Nevada Section; Operator Training And C/T Compliance	
August 1994	Tank Industry Consultants Inc.; Protective Coatings Training	
May 1996	State Of California/Standardized Emergency Management System Training; Beginning And Intermediate	

TOM HOLSON

2600-7 Barrington Street

Bakersfield, California 93309

Phone 661/827-1446

Cell 661/619-5449

TomHols@cs.com

EMPLOYMENT EXPERIENCE

Water Conservation Coordinator

December, 2001-Present

North of the River Municipal Water District

Bakersfield, California

Employed as a contractor to develop and implement Best Management Practices (BMPs) agreed to by the District becoming a signatory of the Memorandum of Understanding with the California Urban Water Conservation Council.

Water Board Director

1990 - 1998

North of the River Municipal Water District

Bakersfield, California

Served two years as president, assisted in hiring new manager, and resolved important District issues.

School Board Trustee

1987 – 1992

Standard Elementary School District

Bakersfield, California

Served two years as president, assisted in the hiring of new superintendent and maintained sound fiscal policies.

E. S. F. & H. Manager

1979 – 1992

Chevron Pipe Line Company

Bakersfield, California

Managed the Environmental, Safety, Fire, and Health compliance programs for Chevron Pipe Line company's California operations. Hired, trained, and supervised eleven employees. Ensured company's compliance with federal, state, and local E. S. F. & H. regulations. Was in charge of, and participated in, employee training programs. Retired in 1992.

District Gauger

1953 – 1978

Chevron Pipe Line Company

Bakersfield, California

Monitored crude oil and gasoline product movements in Company's California pipeline systems.

EDUCATION

Bakersfield College

East Bakersfield High School

Bakersfield, California

Bakersfield, California

REFERENCES AVAILABLE